

## **REMARKS**

Claims 1-9 are pending, of which claims 6-9 have been withdrawn. Claims 1-5 have rejected. Applicant has amended claim 1 and respectfully submits that claims 1-5 are in condition for allowance.

## **Interview Summary**

Applicant acknowledges the Interview Summary mailed on 4 February 2008. The Examiner clarified the period for reply to the Office Action mailed on 11 September 2007. Applicant subsequently filed an Amendment on 11 February 2008, including a request for a two-month time extension. The Amendment of 11 February 2008 was therefore timely filed.

## **Withdrawn Rejections and Objections**

Applicant acknowledges, and thanks the Examiner for, the withdrawal of certain of previously asserted rejections and objections in light of the 11 February 2008 amendment.

## **Claims Rejections – 35 U.S.C. § 112**

Claims 1-5 have been rejected under 35 U.S.C. § 112, second paragraph for the use of the term “predetermined pattern”. Applicant has amended claim 1 to delete the term, and respectfully requests that the rejection be withdrawn.

## **Claims Rejections – 35 U.S.C. § 103**

Claims 1-5 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Wohlstadter* (U.S. Pat. 6,673,533 B1) in view of *O'Connor* (WO200257789 A2). Applicant respectfully traverses the rejection.

Independent claim 1 includes, among other things, the feature of suggest “a common electrode (2) which is fixed on the **lower side surface** of the piezoelectric chip, and a microelectrode array (3) which is fixed on **the upper side surface** of the piezoelectric chip.” Neither of the cited references discloses or suggests this feature. Contrary to the Examiner’s assertion that *Wohlstadter* teaches all the elements of the piezoelectric chip

required by the claimed invention, *Wohlstadter* does not teach or suggest the **spatial relationship** of the common electrode and the microelectrode, namely, that the common electrode and the microelectrode should be fixed on the **two opposite side surfaces** of the piezoelectric chip. *O'Connor* similarly fails to disclose or suggest this spatial relationship.

The difference in the spatial relationship of the elements of the piezoelectric chips results from the difference in the function of the piezoelectric chips. In *Wohlstadter*, the piezoelectric sonication device is used for generating sonication for mixing contents in the cartridge and is not detection device. In contrast, in claim 1 of the present application, the piezoelectric chip is a part of the detection system and the electrode pair fixed on the piezoelectric chip upper and lower surfaces is used to detect the resonant frequency of the piezoelectric chip when contacting a sample.

Claim 1 as previously presented is therefore not obvious in light of the cited references.

To further clarify the claimed invention, Applicant has amended claim 1 to state that the piezoelectric chip (1), a common electrode (2) and a microelectrode array (3) constitute a piezoelectric **resonance array** and the detection of the BSE pathogen is done by **measuring the resonant frequency** of the detection sites. The basis for “a piezoelectric resonance array” and “the immobilized BSE PrP antibody array (4) forms detection sites for the BSE PrPs” can be found at least on page 5, the second paragraph of the English translation of the PCT application. And the basis for “the detection of the BSE pathogen is done by measuring the resonant frequency of the detection sites” can be found at least on page 5, the third paragraph of the English translation of the PCT application. Neither of the cited references discloses or suggests a piezoelectric biochip **used for measuring the resonant frequency**, which use also implies the particular and non-obvious spatial relationship between the electrodes.

For at least these reasons, Applicant respectfully requests the withdrawal of the obviousness rejection of claim 1 and dependent claims 2-5.

### SUMMARY

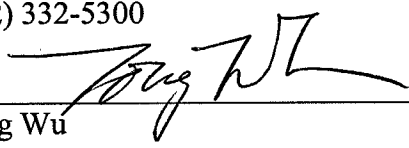
In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.



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Respectfully submitted,

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